

EXHIBITS A & B

**ENVIRONMENTAL COST SHARING, FUNDING, AND
HABITAT CONSERVATION PLAN DEVELOPMENT AGREEMENT**

EXHIBIT A

General Notes

1. Except as noted, all costs are in year 2002 dollars. Future costs have been discounted 3% for present value estimates.
2. Costs for each measure include 3 phases: 1) design/permitting, 2) implementation/construction, and 3) operations & maintenance for the 45 year project period.
3. Costs for each measure are dependent on the specific timing and duration for each phase. Phases were initiated when necessary to provide offsets for expected impacts.
4. Stabilization of the receding Salton Sea shoreline utilizes gravel cover. Costs for alternative measures could vary substantially.
5. No costs are included for any unknown future mitigation measures that might arise from required studies.
6. No specific sites for habitat creation measures have been identified. Costs are planning estimates only and may change depending upon location, local economic conditions, final design, etc.
7. No additional commitment of land, water or other resources is required for adaptive management.
8. Attempts have been made to eliminate duplication of costs among measures.
9. Supporting documentation for each cost estimate is available at CVWD, IID, MWD, and SDCWA.

Estimated HCP Costs

Condition No.

mitigation meas

Present Value
(\$1000) 2002-45yr

Notes

Condition No.	Mitigation Measure	Present Value in thousands (\$2002) Yr 45	Notes and explanation of zero-cost items
General - 1	Hire full-time biologist to manage HCP and participate on HCP Implementation Team.	3,678	First year O&M \$150,000. Begins in 2003.
General - 2	Convene and facilitate HCP IT.	270	Reimbursement for CDFG and USFWS participation on HCP IT. IID biologist participation addressed in General-1. Begins in 2003.
Salton Sea - 2	Pupfish refugium pond.	340	Pond creation to be implemented at end of 15 Year Minimization Plan.
Salton Sea - 3	Tamarisk scrub habitat surveys and creation.	11,132	Surveys and habitat replacement to begin at end of 15 Year Minimization Plan. Maximum creation assumes 1321 acres.
Tree Habitat - 1	Tree habitat surveys and creation.	751	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 34.1 acres.

Tree Habitat - 2	Seepage community surveys and creation.	644	Surveys and habitat replacement to begin at start of efficiency conservation in 2008. Irrigation water to establish tree habitat (5 years) is included at 5AF/acre/year. Irrigation water assumed at \$16/AF. Maximum creation assumes 30 acres.
Tree Habitat - 3	Site surveys for construction scheduling.	7	Surveys to begin at start of efficiency conservation in 2008.
Drain Habitat - 1	Creation of managed marsh habitat.	23,682	73 acres to be implemented in 2003, 117 acres to be implemented at start of efficiency conservation period in 2008, plus the balance of 462 acres to be constructed starting in 2017. The maximum total acreage is 652. Water to sustain marsh is included at 12AF/acre/year with 50% from existing drainage and 50% from purchased irrigation water. Irrigation water assumed at \$16/AF. Redundant with SWRCB order.
Drain Habitat - 2	Avoid dredging river deltas between Feb.15 and Aug. 31.	0	No additional costs assumed for scheduling of maintenance dredging.
Drain Habitat - 3	Site surveys to avoid construction disturbance of covered species.	0	No additional costs assumed for crews to survey areas for wildlife prior to beginning work.
Desert Habitat - 1	Worker education program - training and materials.	37	Begins in 2003.

Desert Habitat - 2	Precautions for workers during O&M of canals and drains.	38	Begins in 2003.
Desert Habitat - 3	Habitat surveys, construction monitoring, and vegetation restoration.	436	Begins in 2003.
Desert Habitat - 4	Habitat surveys and update worker manual.	476	Habitat surveys and worker training manual to begin in 2003.
Desert Habitat - 5	Desert habitat acquisition and management.	118	Habitat acquisition and management to begin at start of efficiency conservation in 2008. Maximum acquisition assumes 100 acres.
Owl - 1	Worker education program for canal and drain maintenance.	60	Begins in 2003. Some possible redundancy with Desert Habitat-1.
Owl - 2	Visual inspection of banks. Mark burrows. Develop standard operating procedures.	920	Operating procedures develop in 2006. Habitat protection measures begin at start of efficiency conservation period in 2008.
Owl - 3	Precautions for grading of spoils near canals and ditches.	0	No additional cost assumed for taking precautions during grading of spoils.
Owl -4	Avoid disturbing burrows. Fill burrows to maintain channel.	2,014	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 5	Manage location and schedule of facility construction.	60	Habitat measures to begin at start of efficiency conservation period in 2008.
Owl - 6	Maintain current techniques for canal and drain maintenance.	0	No additional cost assumed to maintain current techniques.
Owl - 7	Owl abundance, distribution, and demographic surveys.	532	Begins in 2003.

Owl - 8	Avoid disturbing burrows. Replace impacted burrows at 2:1 ratio.	344	Habitat replacement to begin at start of efficiency conservation period in 2008.
Owl - 9	Farmer and public education program.	43	Begins in 2003.
Pupfish - 1	Maintain current levels of pupfish habitat.	862	Habitat maintenance to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 2	Minimize selenium impacts on pupfish.	4,383	Drain channel management to begin at start of efficiency conservation in 2008. Redundant with SWRCB order.
Pupfish - 3	Modifications to increase amount of pupfish drain habitat.	3,658	Habitat creation to begin at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Pupfish - 4	Protocol for surveys to monitor pupfish presence.	863	Protocol developed by start of efficiency conservation period in 2008.
Pupfish - 5	Evaluate effect of drain maintenance on pupfish.	45	Study begins at start of efficiency conservation period in 2008.
Pupfish - 6	Gradual dewatering and salvage of stranded pupfish.	3,469	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.
Razorback Suckers - 1	Salvage fish and return to Colorado River.	40	Fish salvage begins at start of efficiency conservation period in 2008. Redundant with SWRCB order.

Agriculture - 1	Install markers on tailwater pump power lines.	40	Marker installation begins at start of efficiency conservation period in 2008.
Agriculture - 2	Plant and maintain cover crops or ridge till lands to conserve water.	360	Begins in 2003.
Other Species - 1	Implement species surveys and submit study program.	738	Begins in 2003.
Other Species - 2	Implement impact avoidance and minimization measures.	817	Begins in 2004.
Monitoring and Adaptive Management	Monitoring and adaptive management described in Chapter 4 of draft HCP.	0	Costs included in individual measures listed above are assumed to cover adaptive management.
TOTAL HCP		60,857	

Estimated 2002 Biological Opinion Portion of HCP Costs

Condition No.	Mitigation Measure	Present Value In Thousands (\$2002) Yr 45	Notes and explanation of zero-cost items
15 Year Minimization Plan	Acquire and discharge water to the Salton Sea.	50,000	Water to avoid material change in Salton Sea elevation and salinity for 15 years. Redundant with SWRCB order.
Pupfish CM 2	Pupfish selenium toxicity study. Pupfish and selenium monitoring. Develop mitigation. Study of sources and management of selenium.	939	Begins in 2003. Includes selenium studies required by SWRCB.
Willow Flycatcher CM 1	Willow flycatcher breeding habitat evaluation.	228	Habitat surveys to begin at start of efficiency conservation period in 2008.
Willow Flycatcher CM 2	Habitat monitoring and replacement.	733	Habitat monitoring and replacement to begin at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 3	Long-term monitoring plan.	24	Management plan developed at end of 15 Year Minimization Plan. Possible partial redundancy with Tree Habitat 1 & 2.
Willow Flycatcher CM 4	Willow flycatcher take evaluation.	0	Addressed by Willow Flycatcher CM 1.
Brown Pelican CM 2	Roost site creation and monitoring.	1,175	No Year 1 capital cost; habitat creation to be implemented in 2009.
TOTAL 2002 BO		53,099	

Estimated CEQA Costs

Condition No	Mitigation Measure	Present Value in Thousands (\$2002) - Yr 45	Notes and explanation of zero-cost items
Water Quality			
WQ-2	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-4	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-5	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
WQ-7	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
QSA-WR-1	Selenium will exceed ambient water quality criteria.	0	Mitigation determined infeasible. Significant and unavoidable impact.
	Water Quality Subtotal	0	

Agricultural Resources			
AR-1	Prohibit use of non-rotational fallowing. Otherwise, no mitigation measures.	0	No costs for prohibiting use of non-rotational fallowing.
QSA-AR-1	Non-fallowing conservation measures or short term fallowing.	0	Addressed by measure AR-1.
SWRCB-HCP-AR-2	Conversion of up to 700 acres of prime farmland to create habitat.	0	Mitigation determined infeasible. Significant and unavoidable impact.
SWRCB-AR-1	Reclassify up to 50,000 acres of prime farmland or farmland of statewide importance.	0	Addressed by AR-1.
Agricultural Resources Subtotal		0	
Recreation			
R-7	Temporary and permanent relocation of boat launch facilities.	1,600	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 8 boat launch facilities relocated every 3 years through 2040 as necessary.
R-10	Temporary and permanent relocation of camping facilities.	2,889	Salton Sea water level adjustment measures assumed to begin at end of 15 Year Minimization Plan. 88 campsites relocated every 6 years through 2040 as necessary.
QSA-RR-3	Relocation of Salton Sea recreation facilities or use of Conserved Water.	0	Addressed by measures R-7 and R-10.
SWRCB-R-7	Temporary and permanent relocation of boat launching facilities.	0	Addressed by R-7.
SWRCB-R-8	Reduced sportfishing opportunities.	0	Addressed by 15 Year Minimization Plan.

SWRCB-R-9	Implement SSHCS to avoid salinity impacts.	0	Addressed by 15 Year Minimization Plan and Salton Sea 2.
SWRCB-R-10	Temporary and permanent relocation of campgrounds and ancillary facilities.	0	Addressed by R-10.
	Recreation Subtotal	4,489	

Air Quality			
AQ-2	Minimize PM10 emissions during construction and operation of efficiency conservation measures.	1,650	Begins in 2008. Redundant with SWRCB order.
AQ-3	Minimize PM10 emissions during fallowing through conservation measures, soil stabilization, etc.	14,895	Cost includes first year fallowing of 2,500 acres. Begins in 2003.
AQ-4	General conformity determination.	12	Begins in 2008.
AQ-7	Access restriction, research, monitoring. Obtain emission offsets and [or] direct emission reductions at the Sea.	36,774	Monitoring and research begins in 2008. Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan, and be implemented continuously for 20 years.
EJ-2	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
EJ-3	Access restriction, research, monitoring, and ERCs.	0	Addressed by AQ-7.
QSA-AQ-1	Construction SOPs and agricultural BMPs for dust control.	0	SOPs addressed in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-2	Construction BMPs for NOx, fugitive dust.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2 and AQ-3.
QSA-AQ-3	Fugitive dust from decline in Salton Sea levels.	0	Addressed by AQ-7.
SWRCB-AQ-3	Dust control measures.	0	Addressed by AQ-3.

SWRCB-AQ-7	Access restriction, research, monitoring. Obtain emission offsets and direct emission reductions at the Sea.	0	Addressed by AQ-7.
	Air Quality Subtotal	53,331	
Cultural Resources			
CR-1	Cultural resource surveys prior to construction of water conservation measures.	31	Surveys to begin in 2003. Assumes preconstruction surveys for 100 sites over a 15 year period with 5 sites requiring testing and recovery.
CR-2	Protect cultural resources during construction and operation.	0	Addressed by CR-1.
CR-5	Protect cultural resources during reduced flow to Salton Sea. Conduct archaeological surveys.	87	Salton Sea water level adjustment measures assumed to begin three years after end of 15 Year Minimization Plan.
ITA-1	Control of public access on exposed tribal lands.	0	Addressed by CR-5.
QSA-CR-3	Cutural Resource Surveys.	0	Addressed by CR-5.
	Cultural Resources Subtotal	118	

Noise			
N-1	Permanent or temporary sound barriers for construction noise sources.	13	Barriers constructed at start of efficiency conservation period in 2008.
N-2	Permanent sound barriers for pumps in noise-sensitive areas.	15	Barriers constructed at start of efficiency conservation period in 2008.
N-3	Permanent sound barriers for interceptor pumps in noise-sensitive areas.	3	Barriers constructed at start of efficiency conservation period in 2008.
N-4	Permanent or temporary sound barriers for noisy equipment.	0	Addressed by N-1 through N-3.
QSA-N-1	Construction BMPs, sound barriers.	0	Addressed by N-1.
	Noise Subtotal	31	

Geologic Resources			
QSA-GSM-1	Minimize soil erosion through watering, paving, limiting vehicle speeds, crusting agents, and construction monitoring.	1,999	Includes storm water planning and related BMPs. PM10 dust control elements addressed by AQ-2.
QSA-GSM-3	Construction BMPs for soil erosion. Monitor water levels for risk of liquefaction.	0	BMPs included in unit construction costs and dust control measures addressed under AQ-2, AQ-3 and QSA-GSM-1.
	Geologic Resources Subtotal	1,999	
Hazards			
QSA-HHM-1	Assess impacts on local emergency response plans. Complete Phase I studies for potential contamination.	268	Assessment to be implemented at start of efficiency conservation period in 2008. Assumes 10 sites require assessment and 5 sites require a Phase 1 audit.
	Hazards Subtotal	268	
Aesthetics			
A-1	Relocate recreation facilities and develop interpretive facilities and materials.	0	Costs addressed in measures R-7 and R-10.
SWRCB-A-1	Aesthetic impacts from drop in Salton Sea level.	0	Addressed by 15 Year Minimization Plan and A-1.
	Aesthetics Subtotal	0	
TOTAL CEQA		60,236	

Estimated CESA 2081 Costs

Condition No.	Mitigation Measure	Present Value in thousands (\$2003) - Yr 45	Notes and explanation of zero-cost items
Backwater/Marsh	Create and maintain 16.25 acres of marsh and backwater habitat	1,268	Begins 2003, to be completed within 5 years
TOTAL CESA 2081		1,268	

Note: CESA LCR 2081 cost estimate is for mitigation acreage and actions that are in addition to those required in the 2001 Lower Colorado River BO, and assumes that BO measures will be acceptable as satisfaction of comparable 2081 requirements.

Estimated 2001 Lower Colorado River BO Costs

Condition No.	Mitigation Measure	Present Value in thousands (\$2001) - Yr 45	Notes and explanation of zero-cost items
Conservation Measure 1	Stock 10,000 sub-adult razorback suckers into the Colorado River	*	Included in funding agreement
Conservation Measure 2	Create, restore, and maintain 38.25 acres of marsh and backwater habitat	*	Included in funding agreement
Conservation Measure 3	Fund the capture of wild-born or F1 generation bonytails	*	Included in funding agreement
Conservation Measure 4	Restore and maintain 186 acres of southwestern willow flycatcher habitat along the LCR between Parker and Imperial Dams	*	Included in funding agreement
TOTAL 2001 BO		3,000	

* Mitigation Measures shall be accomplished through an agreement with the U.S. Bureau of Reclamation, under which Reclamation shall undertake all required measures in the 2001 LCR BO attributable to the transfer of 200,000 AFY in return for payment of \$3 million in 2001 dollars.

EXHIBIT B

HCP Mitigation Requirements

The HCP Mitigation Requirements include the following measures and requirements, all as described in greater detail in the June 2002 Draft HCP and the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service, as applicable:

June 2002 Draft HCP:

General – 1

General – 2

Salton Sea – 2

Salton Sea – 3, except that the survey of the areas designated as shoreline strand and adjacent wetland shall commence in 2018.

Tree Habitat – 1; Tree Habitat – 2; Tree Habitat – 3

Drain Habitat – 1; Drain Habitat – 2; Drain Habitat – 3

Desert Habitat – 1; Desert Habitat – 2; Desert Habitat – 3; Desert Habitat – 4; Desert Habitat – 5

Owl – 1; Owl – 2; Owl – 3; Owl – 4; Owl – 5; Owl – 6; Owl – 7; Owl-8; Owl-9

Pupfish -1; Pupfish -2; Pupfish – 3; Pupfish – 4; Pupfish – 5; Pupfish -6;

Razorback Suckers – 1

Agriculture – 1; Agriculture – 2

Other Species – 1

Other Species – 2

The monitoring and adaptive management requirements described in Chapter 4 of the Draft HCP.

2002 Biological Opinion

The 15-Year Minimization Plan described on page 17-18 of the December 18, 2002 Biological Opinion issued by the U.S. Fish and Wildlife Service

Pupfish Conservation Measure 2

Willow Flycatcher Conservation Measures 1, 2, 3, and 4

Brown Pelican Conservation Measure 2